

Notice of Allowability

Application No.

10/779,361

Applicant(s)

DEVRIES, PETER DAVID

Examiner

Mark Ruthkosky

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/21/2007.
2. ☒ The allowed claim(s) is/are 1-2, 4-7, 15-16 and 18-21.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

MARK RUTHKOSKY
PRIMARY EXAMINER

Mark Ruthkosky
11-22-07

DETAILED ACTION

Claim Rejections - 35 USC § 112

The rejection of claims 1-7 under 35 U.S.C. 112, second paragraph, as being indefinite has been overcome by applicant's amendment to the claims.

Claim Rejections - 35 USC § 103

The rejection of claims 1-3 and 15-17 under 35 U.S.C. 103(a) as being unpatentable over Lersch (US 2004/0033411 OR PCT/DE01/04392) has been overcome by applicant's amendment to the claims.

The rejection of claims 1-2 and 15-16 under 35 U.S.C. 103(a) as being unpatentable over Knaggs (US 6,372,983) has been overcome by applicant's amendment to the claims.

Allowable Subject Matter

Claims 1-2, 4-7, 15-16 and 18-21 are allowed.

The following is an examiner's statement of reasons for allowance:

The instant claims are to an electromagnetic pulse protected fuel cell power system comprising a fuel cell for converting fuel into electrical energy; an electronic fuel cell controller; and an enclosure for containing said fuel cell and controller, where the enclosure is formed from one or more materials which dissipate or reflect electromagnetic pulse energy, such that the pulse strength within the enclosure is below a damage threshold of electronic devices enclosed within the enclosure; further including

one or more openings in the enclosure, and where said one or more openings each include means to reflect or dissipate electromagnetic pulse energy, said means including at least one element made of a material to reflect or dissipate electromagnetic pulse energy.

The prior art does not teach an electromagnetic pulse protected fuel cell power system comprising a fuel cell for converting fuel into electrical energy; an electronic fuel cell controller; and an enclosure for containing said fuel cell and controller, where the enclosure is formed from one or more materials which dissipate or reflect electromagnetic pulse energy, such that the pulse strength within the enclosure is below a damage threshold of electronic devices enclosed within the enclosure; further including one or more openings in the enclosure, and where said one or more openings each include means to reflect or dissipate electromagnetic pulse energy, said means including at least one element made of a material to reflect or dissipate electromagnetic pulse energy.

The most pertinent prior art has been presented. For example, Lersch (US 2004/0033411 OR PCT/DE01/04392) teaches an electromagnetic pulse protected fuel cell power system comprising a fuel cell for converting fuel into electrical energy; and an enclosure for containing said fuel cell, where the enclosure is formed from one or more materials which dissipate or reflect electromagnetic pulse energy, such that the pulse strength within the enclosure is below a damage threshold of electronic devices enclosed within the enclosure. Further, the connecting components, which connect the fuel cells, are selected with the same protecting advantages. The casing is made of stainless steel, copper and other materials of low magnetic permeability. Auxiliary components for the fuel cell are housed in the enclosure including measuring equipment, sensors, valves, tubes and pipes. The reference teaches that these components are made of materials that are

preferably protecting (p. 33-36.) The reference does not teach an enclosure for containing said fuel cell and controller or one or more openings in the enclosure, and where said one or more openings each include means to reflect or dissipate electromagnetic pulse energy, said means including at least one element made of a material to reflect or dissipate electromagnetic pulse energy.

Claims 4-5 are further allowable because the references do not teach a means to reflect or dissipate electromagnetic pulse energy comprising an electromagnetic pulse attenuating grid or an electromagnetic pulse attenuating honeycomb cover. The reference also does not teach viewing ports in the enclosure that include means to reflect or dissipate electromagnetic pulse energy such as a transparent conductive material coated onto the viewing port. Lersch (US 2004/0033411 OR PCT/DE01/04392) does not teach a means to reflect or dissipate electromagnetic pulse energy comprising an electromagnetic pulse attenuating grid or an electromagnetic pulse attenuating honeycomb cover or viewing ports in the enclosure that include means to reflect or dissipate electromagnetic pulse energy.

In addition, Knaggs (US 6,372,983) teaches a protected fuel cell power system comprising a fuel cell for converting fuel into electrical energy; and an enclosure for containing said fuel cell, where the enclosure is formed from one or more materials which dissipate or reflect electromagnetic pulse energy, such that the pulse strength within the enclosure is below a damage threshold of electronic devices enclosed within the enclosure (claims 1-32, cols. 6-7.) The casing is made of stainless steel and aluminum. These materials are inherently electromagnetic pulse protected. The reference does not teach an electronic fuel cell controller housed in the enclosure or one

or more openings in the enclosure, and where said one or more openings each include means to reflect or dissipate electromagnetic pulse energy, said means including at least one element made of a material to reflect or dissipate electromagnetic pulse energy.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Cancel non-elected claims 8-14 and 22-23.

Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Ruthkosky whose telephone number is 571-272-1291. The examiner can normally be reached on FLEX schedule (generally, Monday-Thursday from 9:00-6:30.) If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at 571-272-1292.

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The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free.)

Mark Ruthkosky

Primary Patent Examiner

Art Unit 1795



11-22-2007